



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/828,422

04/20/2004

Scott David Thomas

GP-303994

5370

7590

04/27/2006

LAURA C. HARGITT

General Motors Corporation, Legal Staff

Mail Code 482-C23-B21

P.O. Box 300

Detroit, MI 48265-3000

EXAMINER

BROWN, DREW J

ART UNIT

PAPER NUMBER

3616

DATE MAILED: 04/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/828,422	Applicant(s) THOMAS, SCOTT DAVID	
	Examiner Drew J. Brown	Art Unit 3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20 is/are allowed.
- 6) ☒ Claim(s) 1-3, 7, 8, 10-16, 18 and 19 is/are rejected.
- 7) ☒ Claim(s) 4-6, 9 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the method of molding or casting the armature and the structural portion with an upper tool and a lower tool, and without a slide must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 3616

4. Claim 7 recites the limitation "said at least one engagement portion" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-3, 7, 8, and 10-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Igawa et al. (U.S. Pat. No. 6,688,637 B2).

With respect to claim 1, Igawa et al. discloses a steering wheel armature (10), an airbag module (1), an electrical switch (33), and an airbag module retention system (Figure 6) including at least one foot (35) and at least one spring (34), wherein the spring is sufficiently configured to retain the foot in a snap-fit engagement (plate 8b retains hook 35b in snap-fit engagement) thereby to fasten the airbag module to the armature (Figure 6). The spring is sufficiently configured to bias the airbag module in a first position in which the switch is open (Figure 6), and wherein the spring is configured to deform upon sufficient application of force to the airbag module to thereby allow movement of the airbag module to a second position in which the switch is closed (column 5, lines 37-40).

With respect to claim 2, the retention system further includes at least one surface (35a) and at least one member (31), and wherein the at least one surface is sufficiently configured and positioned to prevent rotation of the airbag module with respect to the armature by restricting relative movement between the member and the surface (Figure 6).

With respect to claim 3, the surface (35a) is sufficiently configured and positioned to prevent radial movement of the airbag module with respect to the armature by restricting relative movement between the member (31) and the surface.

Art Unit: 3616

With respect to claim 7, at least one member (35a) is sufficiently positioned to restrict outward movement of the at least one engagement portion (outer edge of plate 31) thereby to restrict outward movement of the airbag module.

With respect to claim 8, the airbag module is configured for snap-fit engagement with the spring element prior to assembly of the airbag module and the armature (hook 35b is formed on the projections 35 before assembling the airbag cover 5B to the armature 10).

With respect to claim 10, a conductive path (plate 31) for a horn circuit is operatively connected to the at least one switch (33), wherein the airbag module defines a notch (notch between 35a and 5B in Figure 6) through which a portion of the conductive path extends, and wherein the spring element and the armature cooperate to retain the portion of the conductive path in the notch (Figure 6).

With respect to claim 11, a travel stop (lower edge of plate 31 in Figure 6) restricts inward movement of the airbag module.

With respect to claims 12 and 13, the wheel armature and the structural portion of the airbag module being sufficiently shaped so that it is formable with an upper tool, a lower tool, and without a slide is functional recitation and does not serve to distinguish over the structure of Igawa et al.

With respect to claims 14-16, the structure of the steering wheel assembly of Igawa et al. meets the method limitations.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Igawa et al. in view of Iuchi et al. (U.S. Pat. No. 4,800,775).

Art Unit: 3616

Igawa et al. discloses the claimed invention as discussed above but does not disclose a method of molding the armature with an upper tool and a lower tool, and without a slide.

Iuchi et al., however, does disclose a method of molding an armature with an upper tool (8a) and a lower tool (8b), and without a slide (column 7, lines 35-44).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Igawa et al. in view of the teachings of Iuchi et al. to use an upper and lower tool without a slide to mold the armature in order to manufacture the armature at a reduced cost (column 7, lines 41-44).

9. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Igawa et al. in view of Ross (U.S. Pat. No. 6,250,666 B1).

Igawa et al. discloses the claimed invention as discussed above but does not disclose a method of molding a structural portion of the airbag module with an upper tool and a lower tool, and without a slide.

Ross, however, does disclose a method of molding a structural portion with an upper tool and a lower tool (column 5, lines 58-59), and without a slide (column 7, lines 35-38).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Igawa et al. in view of the teachings of Ross to use an upper and lower tool without a slide to mold the structural portion in order to manufacture the airbag module at a reduced cost.

Allowable Subject Matter

10. Claims 4-6, 9, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Claim 20 is allowed.

Art Unit: 3616

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Suzuki et al., Kassman et al., Shiga et al., Mueller et al., Ernst et al., Schneider et al., and Worrell et al. disclose similar connection mechanisms.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Drew J. Brown whose telephone number is 571-272-1362. The examiner can normally be reached on Monday-Thursday from 8 a.m. to 4 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Drew J. Brown
Examiner
Art Unit 3616

DJB
4/20/06

 4/26/06
PAUL N. DICKSON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600